

# ISAC Meeting – June 14-16, 2011

## ACTION OR INFORMATION ITEM

**SPONSOR (Name/Email):** Stephen Phillips on behalf of EDRR Subcommittee

**TOPIC:** PCR

**SPEAKER (Name/Email):** John Darling (EPA), Kevin Kelly (BOR), Dr. Larry Ludemann (USDA)

**1. DESCRIPTION OF AGENDA ITEM:** The purpose of this agenda item will be for three researchers to present information on PCR.

Dr John Darling will present the finding from his paper, *From molecules to management: Adopting DNA-based methods for monitoring biological invasions in aquatic environments (Darling and Mahon, 2011)*

Dr. Kevin Kelly will present information from his paper *Reliability of Early Detection of Dreissena spp. Larvae by Cross Polarized Light Microscopy, Image Flow Cytometry, and Polymerase Chain Reaction Assays Results of a Community Double-Blind Round Robin Study (Round Robin Study Phase II). Marc E. Frischer, Sandra A. Nierzwicki-Bauer, and Kevin L. Kelly, 2011)*

These two studies will help inform ISAC on the PCR issue. Note: Kevin Kelly recently received a QZAP grant that will include laying the groundwork for a laboratory quality assurance and accreditation program for the detection of *Dreissena* larvae in plankton samples.

**NOTE:** This agenda item relates to the PCR draft white paper outline template.

## **2. WHY IS THIS ITEM IMPORTANT TO NISC / ISAC? HOW IS IT RELATED TO THE NATIONAL INVASIVE SPECIES MANAGEMENT PLAN?**

The increased interest in DNA-based tools for the identification, detection, and monitoring of invasive species has prompted widespread speculation on the future availability of inexpensive, rapid, and accurate means of identifying specimens and assessing biodiversity. There have been numerous examples in recent years of resource agencies struggling to make the right management decision because of inconclusive results from alternative laboratory analysis of invasive species (one example being dreissenid veliger plankton samples). In addition, agencies that are responsible for managing AIS require a separate and independent verification of early detection of AIS before taking any action. These agencies speak of a need to test the performance of individual laboratories and validate the reliability of their analytical results, as well establishing an accreditation program for lab certification.

## **3. PREVIOUS ACTIONS TAKEN BY NISC / ISAC ON THIS ITEM:**

The EDRRSC is developing a draft outline for a white paper for presentation to ISAC at the June meeting.

## **4. ACTION REQUESTED OF NISC / ISAC:**

These two studies will help inform ISAC as to the PCR issue.

## **5. ALTERNATIVES:**

**6. ATTACHMENTS:** The draft outline will not be available until May 2011. The objectives and process document for the draft outline from the December meeting can be found at [http://www.invasivespecies.gov/global/ISAC/ISAC\\_Minutes/2010/Tab5/EDRR/EDRR\\_SC\\_PCR\\_Outline\\_PLANNING\\_PROCESS\\_12-2010.pdf](http://www.invasivespecies.gov/global/ISAC/ISAC_Minutes/2010/Tab5/EDRR/EDRR_SC_PCR_Outline_PLANNING_PROCESS_12-2010.pdf).

The Kelly document can be found at <http://www.musselmonitoring.com/Reports/RRII%20Final%20Report%20%282010%29.pdf>